

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1) (Currently Amended) A computer system operation method for use in a system comprised of a plurality of workstations arranged in a peer-to-peer architecture, said method providing a means for allowing multiple users simultaneously to modify a model of an object at separate workstations, such that any modification made at any workstation is duplicated at each other workstation in the system, the method comprising:

receiving at a first workstation input from a user specifying a modification of first data comprising a representation of a model of an object, said input comprising one or more constraints relating to cell information;

upon receipt of the input specifying the modification and under control of the first workstation, translating said input into a command specifying the portion of the first data to be modified, and the modification to be made;

modifying said first data by said first workstation in accordance with said command to effect a change in the model as represented by said first data;

substantially concurrent with said modifying of said first data, automatically transmitting said command via a network to other workstations in the system;

automatically processing said command at a second workstation upon receipt of said command; and

modifying second data comprising a representation of the model of the object, the second data being automatically modified by the second workstation in accordance with said command to effect the change in the model represented by said second data, said change in the model

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represented by said second data being made substantially simultaneous with the change in the model represented by said first data;

and wherein said method further comprises:

- a) selecting the first constraint of said input and identifying the components of the CAD system that must be accessed to find geometric cells meeting the requirements of the constraint;
 - b) searching the cells of the model and retaining as a subset only the cells that meet the requirement of the first constraint of said input;
 - c) selecting the next constraint of said input and identifying the components of the CAD system that must be accessed to find geometric cells meeting the requirements of said next constraint;
 - d) searching the subset of cells and retaining in the subset only the cells that meet the requirement of said next constraint of said input; and
 - e) repeating steps c) and d) for each of the remaining constraints in said input.
- 2) (original) The computer system operation method of Claim 1, wherein said plurality of workstations each run applications comprising a distributor component, a feature modeler, and a geometric modeler.
- 3) (original) The computer system operation method of Claim 1, wherein said plurality of workstations each run applications comprising a distributor component, and a feature modeler.
- 4) (original) The computer system operation method of Claim 2, wherein said distributor component, feature modeler, and geometric modeler on each of said plurality of workstations are the same.

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- 5) (original) The computer system operation method of Claim 4, wherein said geometric modeler on each of said plurality of workstations employs persistent generic naming.
- 6) (Cancel).
- 7) (Currently Amended) The computer system operation method of Claim 6, wherein the constraints are chosen from a group comprising:
 - a) constraints relating to cell dimension;
 - b) constraints relating to the topology of a cell;
 - c) constraints relating to the history of the model evolution;
 - d) constraints relating to specific attributes of a cell; and
 - e) constraints relating to geometrical indications of a cell.
- 8) (Currently Amended) A CAD/CAM device comprising:
 - an input device;
 - a central processing unit; and
 - a display device;wherein the central processing unit runs an application program comprising code for:
displaying a representation of a model, said representation being generated based on first data associated with said workstation ;
receiving input comprising one or more constraints relating to cell information of the model from a user specifying a modification of the model;

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upon receipt of the input specifying the modification, translating said input into a command specifying the portion of the first data to be modified, and the modification to be made to the first data;

modifying the first data in accordance with said command to effect a change to the model; and

substantially concurrent with said modifying of said first data, automatically transmitting said command via a network to other CAD/CAM devices connected to said network to effect changes to duplicate copies of said first data stored at the other CAD/CAM devices;

for each constraint, determining which cells of the model meet the requirement of the constraint; and

generating a list of cells meeting all of the requirements of the constraints.

- 9) (original) The CAD/CAM device of Claim 8, further comprising a distributor component, a feature modeler, and a geometric modeler.
- 10) (original) The CAD/CAM device of Claim 8, further comprising a distributor component, and a feature modeler.
- 11) (original) The CAD/CAM device of Claim 9, wherein said geometric modeler employs persistent generic naming.
- 12) (Cancel)
- 13) (Currently Amended) The CAD/CAM apparatus of Claim 12 8, wherein the application program processes constraints chosen from a group comprising:
 - a) constraints relating to cell dimension;

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- b) constraints relating to the topology of a cell;
 - c) constraints relating to the history of the model evolution;
 - d) constraints relating to specific attributes of a cell; and
 - e) constraints relating to geometrical indications of a cell.
- 14) (Currently Amended) A CAD system comprised of a plurality of workstations linked together via a communications network, each workstation equipped with program code comprising a distributor component, and a feature modeler, and further comprising program code for causing said workstation to perform a method comprised of:

storing first data representing a model;

receiving input comprising one or more constraints relating to cell information of the model from a user specifying a modification of said model;

translating said input into a command specifying the portion of the first data to be modified, and the modification to be made;

modifying said first data in accordance with said command; and

substantially concurrent with said modifying of said first data, transmitting said command via said network to other workstations in the system to instruct said other workstations to modify duplicate copies of said first data so as to maintain a consistent representation of the model by the first data and by the duplicate copies of said first data; and

wherein said code further comprises code for:

for each constraint, determining which cells of the model meet the requirement of the constraint; and

generating a list of cells meeting all of the requirements of the constraints.

15) (original) The CAD system of Claim 14, each workstation further comprising a geometric modeler.

16) (original) The CAD system of Claim 15, wherein said geometric modeler employs persistent generic naming.

17) (Cancel).

18) (Currently Amended) The CAD system of Claim 17 14, wherein the code causes the workstation to process constraints chosen from a group comprising:

- a) constraints relating to cell dimension;
- b) constraints relating to the topology of a cell;
- c) constraints relating to the history of the model evolution;
- d) constraints relating to specific attributes of a cell; and
- e) constraints relating to geometrical indications of a cell.

19) (Currently Amended) Computer executable code stored on a computer readable medium, the code comprising means for causing a CAD system to perform a method for:

displaying a representation of a model, said representation being generated from first data comprising a stored representation of the model;

receiving input comprising one or more constraints relating to cell information from a user specifying a modification of the model;

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translating said input into a command specifying the portion of the model to be modified, and the modification to be made;

modifying said first data in accordance with said command to effect said model modification; and

transmitting said command via a network to other CAD/CAM devices for receipt by a peer CAD system program executing at said other CAD/CAM device to instruct the peer CAD system program to alter a copy of said first data comprising a duplicated stored representation of the model such that real-time synchronization of the model as represented by the first data and as represented by the copy of said first data is maintained;

and the code further comprising means for causing a CAD system to perform a method for:

for each constraint, determining which cells of the model meet the requirement of the constraint; and

generating a list of cells meeting all of the requirements of the constraints.

20) (previously presented) Computer executable code stored on a computer readable medium according to Claim 19, the code further comprising means for causing a CAD system to perform a method for:

receiving from the network a command specifying a portion of the model to be modified, and the modification to be made; and

modifying said first data in accordance with said received command to effect a modification to be made.

21) (Cancel).

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22) (Currently Amended) Computer executable code stored on a computer readable medium according to claim 2419, wherein said constraints used in said method are chosen from a group comprising:

- a) constraints relating to cell dimension;
- b) constraints relating to the topology of a cell;
- c) constraints relating to the history of the model evolution;
- d) constraints relating to specific attributes of a cell; and
- e) constraints relating to geometrical indications of a cell.

23) (Cancel).

24) (Cancel)

25) (Cancel).

26) (Amended) The computer system operation method of claim 251, wherein the constraints are chosen from a group comprising:

- a) constraints relating to cell dimension;
- b) constraints relating to the topology of a cell;
- c) constraints relating to the history of the model evolution;
- d) constraints relating to specific attributes of a cell; and
- e) constraints relating to geometrical indications of a cell.